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REPORT

ON THE

Government Horticultural Gardens,

LUCKNOW,

FOR THE

YEAR ENDING 31ST MARCH 1907.

ALLAHABAD:

Printed at the United Provinces Government Press.

1907.

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Hemendra Kothari

on 24 February, 2020

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No. $\frac{1233}{\text{Va—931}}$ of 1907.

From

THE DIRECTOR OF LAND RECORDS AND AGRICULTURE,
UNITED PROVINCES,

To

THE CHIEF SECRETARY TO GOVERNMENT,
UNITED PROVINCES, REVENUE DEPARTMENT,
NAINI TAL.

Dated Lucknow, the 25th of May 1907.

SIR,

I HAVE the honour to submit for the orders of Government the report on the Government horticultural gardens at Lucknow for the year ending 31st March 1907. Nothing in the report calls for comment from me, but I take this opportunity of expressing my thanks to Mr. S. H. Butler, C.I.E., the Deputy Commissioner of Lucknow, who has given much time and thought to the gardens and has planned many of the improvements so ably carried out by Mr. Davies.

2. Acknowledgments are due to the donors mentioned in Appendix B of the report.

I have the honour to be,
SIR,
Your most obedient servant,
W. H. MORELAND,
Director.

Maximum limit of report—seven pages.

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REPORT on the GOVERNMENT HORTICULTURAL GARDENS, LUCKNOW, for the year ending 31st March 1907.

I.—INTRODUCTORY.

1. *Charge of the gardens.*—I held charge of the gardens from the 1st April to the 26th April 1906 on which date I went on three months' privilege leave. I resumed my duties on the 26th July and remained in charge to the end of the year under report. During my absence on leave Mr. Brown, Superintendent of the Fyzabad gardens, was deputed to hold charge of the gardens.

2. *Important administrative events.*—There is nothing to record under this head beyond the improvements in the garden referred to in the following paragraph.

3. *State of the gardens.*—I am able to report that many of the improvements that were arranged to be carried out during the year were accomplished though there is still a great deal to be done and efforts will be made during the coming year to complete the work.

The lawns of the Sikanderbagh enclosure were extended on the south and east sides.

On the north side of the garden between the office and Shah Najaf Tomb, extensive alterations were made. The high wall dividing the garden from the Shah Najaf was demolished and a number of trees cut down and lawns made. This extension necessitated the removal of a cluster of small native houses and cattle sheds which were always in an insanitary condition.

The opening out of this side of the gardens has been greatly appreciated and views are now obtained of some of the historic buildings of Lucknow that were not previously visible from the gardens. The old exotic plantation on the west side of the garden received attention, and by the judicious removal of some of the commoner plants and duplicate specimens those remaining are now given a good chance of developing. In other parts of the garden the thinning out process was continued regarding trees which had originally been planted too close together and in places where their growth interfered with the cultivation of plants beneath them.

The shrub nursery has been entirely rearranged, and we now have all the plants collected in one plot where the public can conveniently inspect them, regularly arranged, paths having been made and all the groups of plants named. The rose nursery has been extended to provide for the largely increased demand for these plants and during the coming year it is proposed to further enlarge the nursery and set apart a plot for the cultivation of roses for cut-blooms. Improvements were made to the large plant house by the building of a fountain and altering the alignment of the paths and beds, also the erection of a new door in the centre of the house, the two small side doors having been removed. A new propagating house was constructed by Messrs. Jessop and Co., at a cost of Rs. 2,497. This house has proved of great service to the gardens and has enabled us to collect in one place the choicer varieties of palms, ferns and other valuable plants where they can be protected from theft and adverse weather conditions. The old brick fernery has been repaired and reroofed. A large pergola has been erected on the south side of the garden for the growth of specimen climbing plants. On the east side of this pergola, which is 280 feet long, is planted a specimen of each of the climbers for which there is a steady demand and here their propagation will be carried out. On the west side facing the main road specimens of free flowering climbers are planted with the object of making the pergola as attractive as possible. A show plant house has been built close to the office. In this house will be exhibited specimens of all the choicest varieties of palms and foliage plants in pots, besides flowering plants, including chrysanthemums, lilies and orchids when in season. Many of the roads in the gardens were widened several feet to provide more room for vehicular traffic and along their sides was planted a fairly wide strip of grass to give the gardens a better kept appearance. The usual repairs to roads were done during the rains.

Owing to stress of work and my absence on leave the large strip of land on the north-east side of the garden was not laid out as proposed in my report of last

year. Efforts will be made during the present year to work out a scheme for planting up the land. An exotic garden for the reception of rare trees and shrubs will form one of the chief features of the scheme. Arrangements were made for constructing the river road from the paper mills bridge to the corner of Kadam Rasool but were not carried out as the work was taken over by the Public Works Department.

4. *Character of the season.*—The rainfall of the year was exceptionally good and evenly distributed. The total amount registered was 49·63 inches as against 30·07 inches of the previous year. Throughout the year the weather conditions were in every way favourable to the growth of plants. Frosts were never severe enough to do any damage and at the present time our stocks of young fruit trees are most promising.

II.—ACCLIMATIZATION AND OTHER EXPERIMENTAL WORK.

5. *Fruit and food-producing trees and plants.—Fruit crops.*—Mangoes, loquats, figs, grapes and peaches produced good crops. Oranges and pummelows were not up to the average, but this was probably due to the heavy crops borne by the trees in the preceding year.

See Appendix C.

Fruit nurseries.—There was again a good demand for fruit trees of various kinds, but as in previous years, the garden was unable to meet all indents, though in this respect there has been a decided improvement, and as our present stock is a much larger one than usual, we hope to be able to show much better results during the coming year.

Vegetable garden.—Vegetables were not cultivated on as large a scale as in previous years owing to the fact that only a limited number of *dalies* were supplied. A number of experiments were made in the cultivation of vegetables for seed. The best varieties of various kinds were selected for this purpose and the results so far obtained are most satisfactory. I hope next year to be able to report favourably regarding my efforts in this direction.

6. *Other trees and plants of economic value.—Castilloa Elastica.*—These plants are making excellent growth and I proposed to plant them out in their permanent quarters next rains.

Tomatoes.—Experiments were carried out with these plants with good results. For several seasons past tomatoes had not been grown in the garden with success, and the object of the experiment was to prove to the garden staff that tomatoes could be grown as well in Lucknow as in any other part of India. A selection of some of the best varieties was made and the plants cultivated according to my instructions on the single stem system. The plants bore heavy crops of fine fruits which were exhibited at the Annual Flower and Vegetable Show in March and received a special award. A good supply of seed of all the varieties experimented with is available for sale to the public.

Agave Sisalana.—There was a better demand for these fibre-producing plants than in the preceding year, over 16,000 plants and bulbils being supplied. Our present stock of plants is large enough to meet all moderate indents.

Pears.—Experiments were made with the varieties La Conte and Kieffer pears. The trees, though in good health, had failed to produce fruit. In some cases root pruning was tried, in others ringing the bark, whilst in others the branches were heavily pruned. All the trees have benefited by the particular treatment given though the best results were obtained by root pruning. The direct effects obtained were less vigorous growth and the formation of numerous fruiting spurs. Some of the trees have flowered and set fruit and if the trees are carefully attended to in the future in the matter of pruning, etc., the present improved conditions should become permanent. Lucerne (Medicago sativa). A plot of land measuring rather more than an acre was sown with lucerne in October last with the object of supplying the gardens with seed. The plants have made excellent growth and the experiment promises to be the means of producing a good revenue.

See Appendix C.

7. *Ornamental trees and plants.*—During the year under report 18,106 ornamental trees and shrubs were sent out from the gardens, this number being slightly below that of the previous year. The sale of bulbs and tubers was much larger than usual, the number being 20,500 as against 5,242 of the preceding year. The total issue of plants including those distributed free and in exchange numbered 50,946 against 37,720 of 1905-6. The stock of plants in the nursery is steadily

increasing and with the improved facilities for cultivation and propagation provided by the newly erected plant houses, it should receive a further impetus.

III.—FINANCIAL RESULTS.

8. *Receipts.*—The estimated receipts of the garden were Rs. 20,000 and the actual receipts Rs. 20,668. Plants, seeds and cut flowers were issued free and at reduced rates to the value of Rs. 3,459. If the latter amount be added to that of actual receipts, the total revenue for the year is Rs. 24,127 or an increase of Rs. 450 over the total revenue of last year. See Append A.

9. *Expenditure.*—This was estimated at Rs. 24,700, while the actual expenditure was Rs. 29,767 or Rs. 5,067 more than the estimate. The excess expenditure is accounted for by extra grants being sanctioned for improvements to the garden, *viz.*, Rs. 4,000 with the budget, Rs. 400, *vide* Government Order No. 1367/XB10-1—11, dated the 21st March 1907, and Rs. 760 for Sikanderbagh lawns through Public Works Department, *vide* Government Order No. 1525W/651, dated 1st May 1906. See Append A.

10. *Surplus or deficit.*—The total receipts of the year as compared with the expenditure show a deficit of Rs. 5,640. If the book credits are excluded and only actual cash receipts paid into the treasury shown, the deficit is Rs. 9,099.

IV.—MISCELLANEOUS.

11. *Training of gardeners.*—There were 29 applications for trained gardeners during the year, none of which were complied with, the reasons being the same as given in my last report. There were 14 apprentices under training as gardeners, the majority being under 12 years of age.

Subscribers.—There are now only nine subscribers on the books, this number being one less than last year.

12. *Arboriculture.*—The remarks made by me in my report for 1905-6 regarding the improved state of the arboricultural nursery were fully endorsed during the past year. The nursery was able to comply with all the indents received, the number of trees sent out showing a marked increase over previous years. We now have a good stock of plants in all stages of development, about 16,500 being ready for distribution. Nearly 7,000 healthy plants were supplied to the public during the past year. In many respects it is to be regretted that the land forming the nursery has to be vacated during the coming year owing to its being required for building purposes, but as due notice was given well in advance of the date for which the land is required, I have made arrangements for the disposal of a large number of the young trees. Some loss and inconvenience must necessarily follow the removal of the nursery, but it is hoped that in a short time the stock of plants will be again raised to its present satisfactory condition. A site for the new arboricultural nursery has been secured close to the Horticultural gardens.

The allotment for maintenance was Rs. 1,280, out of which Rs. 1,114 were spent. The revenue amounted to Rs. 108.

Owing to my absence on leave the arboricultural class started in the year 1905-6 was not held during the year under report. During the coming year the class will be continued and judging by the numbers who have applied to be trained good work should be accomplished.

Eucalyptus plantation.—The trees in the Eucalyptus plantation received a further thinning out to allow the bigger specimens more room for development and a neat wire fence was erected on three sides of the grove.

The stock plants of Agave Sisalana which occupy a strip of land on the north side of the plantation have again flowered freely and promise to yield a large quantity of bulbils.

13. *Flower Show.*—A chrysanthemum show was held in the Wingfield Park on the 1st December 1906. The show was well attended and the exhibits were good. A keen interest was taken in the show by competitors from out stations, Allahabad, Cawnpore, Fyzabad, Lahore and Gorakhpur being represented.

The annual flower and vegetable show was held in the Wingfield Park on the 2nd March 1907. The exhibits were quite up to the usual standard and I am glad to report that the vegetables and fruit classes showed a decided improvement over last year. The gate receipts showed a better attendance than usual.

The receipts of the chrysanthemum show were Rs. 429, against Rs. 95 of the previous show, and the expenditure Rs. 292.

The receipts of the annual flower show were Rs. 817 and the expenditure Rs. 874.

The funds now standing to the credit of the flower show account at the Bank of Bengal amount to Rs. 571.

14. *Conclusion.*—In spite of the increase of work and some minor changes in the staff, the office is in a very satisfactory condition. Special efforts have been made to ensure a more efficient working of the seed distribution department and in this work all the members of the staff have given me much assistance.

H. J. DAVIES,

Supdt., Govt. Horticultural Gardens,

Lucknow.

The 8th May 1907.

APPENDIX A.—(*See report paragraphs* 8 *and* 9).

Statement showing the receipts and the expenditure of the Government Horticultural Gardens, Lucknow, for the year ending 31*st March* 1907.

Heads.	Actuals of 1905-6.	Budget head for 1906-7.	Actuals of 1906-7.
1	2	3	4
	Rs.	Rs.	Rs.
Receipts	20,662	20,000	20,668
Total, Receipts ...	20,662	20,000	20,668
CHARGES.			
Superintendent	2,634	3,996	2,238
Establishment	6,690	7,805	5,859
Allowances	192	200	77
SUPPLIES AND SERVICES.			
Purchase of seeds and plants	5,102	4,500	5,036
Ditto of live stock	170	600	260
Feed of live stock	1,638	1,800	2,753
Purchase of manure	408	500	131
Rent of land	24	24	24
Maintenance of premises	8,920	1,000	8,485
Cooly labour	2,264	1,400	1,969
Contingencies	4,471	2,875	2,935
Total, Charges ...	32,513	24,700	29,767

APPENDIX B.

List of contributors to the garden during the year ending 31*st March* 1907.

Names of contributors.	Name and description of articles contributed.
Ross Scott, Esq., I.C.S., Lucknow ...	1 packet papaya seeds.
Dilkusha Gardens, Lucknow ...	1 „ date palm seeds (from Multan).
Colonel Lindsay, Lucknow ...	1 „ Australian pepper seeds.
G. R. Bird, Esq., A Birar ...	1 „ Erythrina indica seeds.
Ditto ditto ...	1 „ Cassea marginata seeds.
Ditto ditto ...	1 „ Agate grandi flora seeds.
Mr. Buths, Bangalore ...	1 „ silver oak (Grevillea).
Syed Amir Hasan, Bara Banki ...	½ lb. bamboo seeds.
The Superintendent, Royal Botanical Gardens, Calcutta.	15 packets ornamental trees and shrubs, &c.
Nathu Singh, head gardener, Barackpore.	1 „ Brownea ariza.
G. A. Gammie, Esq., College of Science, Poona.	1 „ Nelumbium speciosum.
Rev. G. H. Westcott, S. P. G. Mission, Cawnpore.	1 „ white hibuscus.
Dr. A. Robertson Prochowskey, M.D.	1 „ Oreopanax plantani folium.
Pare Les Tropiquis, Chemindes Grottes, St. Heleinna, Nice A. M. France.	1 „ Calyptronoma dulcis.
	1 „ phoenix hybrida.
Ditto ditto ...	1 „ Eupatorium atrorubeus.
Ditto ditto ...	1 „ Artomesia arborescens seeds.
J. Fitzpatick, Esq., Dehra Dun ...	93 bulbs of sorts.
The Empress Botanical Gardens, Poona	18 packets of fruit and other plants.
H. French, Esq., Fort hampton court Tewkesbury, England.	29 „ of seeds of sorts.
Messrs. Neal and Wilkinson, London	8 „ of trees and shrubs.
R. A. Fairlie, Esq., Allahabad ...	100 annual plants.
The Superintendent, Public Gardens, Jamaica.	1 packet Astrocaryum vulgare.
Ditto ditto ...	1 „ Pinanga kubli.
Ditto ditto ...	1 „ Copernica cerifera.
Ditto ditto ...	1 „ Sabal adansomi.
J. N. Pogose, Esq., Lucknow ...	1 „ Gloxinia hybrida grandiflora.
Ditto ditto ...	1 „ Carnation.
Ditto ditto ...	1 „ Dianthus caryophyllus.
R. Gill, Esq., Cornwall, England ...	1 „ Dianthus puniceous.
J. C. Harvey, Esq.	6 „ shrub and other seeds.

APPENDIX C.—(*See report, paragraphs* 5 *and* 7).

Showing the amount of plants and seeds distributed from the gardens during the year ending 31*st March* 1907.

Names of departments, &c., supplied.	Plants.								Seeds.					Total.	
	Fruits.			Ornamental and timber trees.		Ornamental plants and shrubs.		Bulbs and tubers.	Total.	Vegetables.	Flowers.	Fruits.	Trees and shrubs.	Miscellaneous.	Number of packets.	Weight.
	Plants.	Cuttings.	Strawberries.	Plants.	Cuttings.	Plants.	Cuttings.									
																lbs. Oz.
General public	1,800	40	2,000	4,500	...	16,506	2,000	20,000	46,846	5,250	6,509	4	50	...	11,813	1806-6
Government and public gardens in India.	600	...	...	900	...	1,500	...	500	3,500	300	455	...	18	...	773	359-3
Government and public gardens in other countries.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jails	300	...	...	200	...	100	...	...	600	88	100	...	8	...	196	30-4
Total ...	2,700	40	2,000	5,600	...	18,106	2,000	20,500	50,946	5,638	7,064	4	76	...	12,782	2195-13

Digitized with financial assistance from

Hemendra Kothari

on 24 February, 2020

ORDERS OF GOVERNMENT.

No. $\frac{1649}{\text{I—525-1907}}$ OF 1907.

FROM

THE HON'BLE MR. J. M. HOLMS, C.S.I.,

CHIEF SECRETARY TO GOVERNMENT,

UNITED PROVINCES,

To

THE DIRECTOR OF LAND RECORDS AND AGRICULTURE,

UNITED PROVINCES.

DATED NAINI TAL, THE 21ST JUNE 1907.

SIR,

REVENUE DEPT. I AM directed to acknowledge the receipt, under cover of your letter no. $\frac{1233}{\text{Va—931}}$, dated the $\frac{\text{25th May}}{\text{5th June}}$ 1907, of the annual report on the Government horticultural gardens at Lucknow for the year ending the 31st March 1907.

I have the honour to be,

SIR,

Your most obedient servant,

J. M. HOLMS,

Chief Secretary.